



## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. FAA-2018-0309; Product Identifier 2018-SW-014-AD]

RIN 2120-AA64

#### Airworthiness Directives; Leonardo S.p.a. Helicopters

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to adopt a new airworthiness directive (AD) for Leonardo S.p.a. (Leonardo) Model AW189 helicopters. This proposed AD would require inspecting the tail plane installation forward bolts (bolts) and depending on the results of those inspections, removing certain parts from service or installing a tail plane retromod. This proposed AD would also require torquing certain part-numbered nuts, inspecting bolts and nuts for wear, and depending on the results of those inspections, removing parts from service. This proposed AD was prompted by two reported failures of the bolts. The actions of this proposed AD are intended to address an unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- **Federal eRulemaking Docket:** Go to <https://www.regulations.gov>. Follow the online instructions for sending your comments electronically.
- **Fax:** 202-493-2251.
- **Mail:** Send comments to the U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey

Avenue SE, Washington, DC 20590-0001.

- Hand Delivery: Deliver to the “Mail” address between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2018-0309; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD, any comments received, and other information. The street address for Docket Operations is listed above. Comments will be available in the AD docket shortly after receipt.

For service information identified in this proposed rule, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

**FOR FURTHER INFORMATION CONTACT:** Scott Franke, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5889; email [scott.franke@faa.gov](mailto:scott.franke@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2018-0309; Product Identifier 2018-SW-014-AD” at the beginning of

your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposal.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Scott Franke, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5889; email [scott.franke@faa.gov](mailto:scott.franke@faa.gov). Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Discussion**

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA Emergency AD No. 2018-0047-E, dated February 28, 2018, to

correct an unsafe condition for Leonardo S.p.A. (formerly Finmeccanica S.p.A., AgustaWestland S.p.A.) Model AW189 helicopters. EASA advises of two reported incidents of failed bolts and that fretting and wear were identified as the root cause of the failures. EASA states that this condition, if not detected and corrected, could lead to reduced control of the helicopter.

According to EASA, Leonardo Helicopters issued Emergency Alert Service Bulletin No. 189-177, Revision A, dated February 28, 2018 (EASB 189-177), to address this unsafe condition and provide instructions for inspecting each bolt part number (P/N) 8G5510A06251 and 8G5510A05951 and installing an improved tail plane installation retromod P/N 8G5510P00511 (tail plane retromod). However, EASA advises that because the tail plane retromod was previously available in production or through optional Leonardo Service Bulletin No. 189-130, dated January 30, 2017 (SB 189-130), adjustment of the bolt torque is necessary for some helicopters because an incorrect torque value for installation of the bolts was specified. Accordingly, the EASA AD requires repetitive inspections of each bolt, installing a tail plane retromod, adjustment of the bolt torque for some helicopters that had the tail plane retromod installed either in production or by following SB 189-130, and repetitive torque checks of the bolts.

#### **FAA's Determination**

These helicopters have been approved by EASA and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with the European Union, EASA has notified the FAA of the unsafe condition described in its AD. The FAA is proposing this AD after evaluating all known relevant information and determining that an unsafe condition is likely to exist or develop on other products of the same type designs.

#### **Related Service Information Under 1 CFR part 51**

The FAA reviewed EASB 189-177, which contains procedures for inspecting

each bolt and installing the tail plane retromod. This service information also contains procedures for repetitively verifying the torque of the associated nut P/N MS17825-7 (nut).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Proposed AD Requirements**

For Model AW189 helicopters without a tail plane retromod installed, this proposed AD would require, before further flight and thereafter before each flight, inspecting each bolt for a missing bolt head, breakage, and correct installation. If there is a missing bolt head, a broken bolt, or an incorrectly installed bolt, this proposed AD would require, before further flight, removing the bolt from service and installing the tail plane retromod.

For Model AW189 helicopters with a tail plane retromod installed with an incorrect torque value (installed either in service in accordance with SB 189-130 or in production, which this proposed AD specifies by serial number), this proposed AD would require, within 10 hours time-in-service (TIS), correcting the torque, installing a cotter pin, and lockwiring each nut on the adjustable rod assembly P/N 4F5510A00232.

Lastly, within 10 hours TIS after installing a tail plane installation retromod, within 10 hours TIS after correcting an incorrect torque value, or within 10 hours TIS after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 50 hours TIS, this proposed AD would require determining the torque of each nut. If the torque is less than 15 Nm (11 ft-lbs) or more than 20 Nm (14.75 ft-lbs), this proposed AD would require inspecting the bolt and nut for wear, and removing the bolt and nut from service if there is any wear.

### **Differences between this Proposed AD and the EASA AD**

The EASA AD requires repetitive torque checks at progressively increasing intervals, while this proposed AD would require the repetitive torque check at intervals not to exceed 50 hours TIS. Since there is not enough field data at this time to substantiate progressively increasing the time between inspections up to 400 hours TIS, the FAA has determined an interval of 50 hours TIS is necessary. The FAA may take further rulemaking action to increase this interval should more data become available.

### **Interim Action**

The FAA considers this proposed AD to be an interim action. If final action is later identified, the FAA might consider further rulemaking then.

### **Costs of Compliance**

The FAA estimates that this proposed AD would affect 4 helicopters of U.S. Registry. The FAA estimates that operators may incur the following costs in order to comply with this proposed AD. Labor costs are estimated at \$85 per work-hour.

Inspecting the bolts before each flight would take about 0.25 work-hour, for an estimated cost of \$21 per helicopter and \$84 for the U.S. fleet per inspection cycle.

If required, installing a tail plane retromod would take about 12 work-hours and parts would cost about \$5,500, for an estimated cost of \$6,520 per helicopter.

Inspecting and verifying the torque of the bolts and nuts would take about 1 work-hour, for an estimated cost of \$85 per helicopter and \$340 for the U.S. fleet per inspection cycle.

If required, replacing a bolt and nut would take about 1 work-hour and parts would cost about \$250, for an estimated cost of \$335 per replacement.

According to Leonardo's service information, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. The FAA does not control warranty coverage by Leonardo. Accordingly, the FAA has included all costs in its cost estimate.

## **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

## **Regulatory Findings**

The FAA determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA

proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

**Leonardo S.p.a.:** Docket No. FAA-2018-0309; Product Identifier 2018-SW-014-AD.

#### **(a) Applicability**

This airworthiness directive (AD) applies to Leonardo S.p.a. Model AW189 helicopters, certificated in any category.

#### **(b) Unsafe Condition**

This AD defines the unsafe condition as failure of a tail plane installation bolt. This condition could result in reduced control of the helicopter.

#### **(c) Comments Due Date**

The FAA must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(d) Compliance**

You are responsible for performing each action required by this AD within the specified compliance time unless it has already been accomplished prior to that time.

#### **(e) Required Actions**

(1) For helicopters without a tail plane installation retromod part number (P/N) 8G5510P00511 (tail plane retromod) installed, before further flight and thereafter before each flight, inspect each forward attachment bolt (bolt) P/N 8G5510A06251 and 8G5510A05951 for a missing bolt head, breakage, and correct installation as depicted in Figure 12 of Leonardo Helicopters Emergency Alert Service Bulletin No. 189-177, Revision A, dated February 28, 2018 (EASB 189-177). If there is a missing bolt head, a

broken bolt, or an incorrectly installed bolt, before further flight, remove the bolt from service and install the tail plane retromod by following the Accomplishment Instructions, Part II, paragraphs 3.1 through 3.33 of EASB 189-177, except you are not required to discard parts and where EASB 189-177 specifies contacting Leonardo PSE for corrective action, the action must be accomplished using a method approved by the Manager, International Validations Branch, FAA. The Manager's approval letter must specifically refer to this AD.

(2) For helicopters with a tail plane retromod installed in accordance with Leonardo Helicopters Service Bulletin No. 189-130, dated January 30, 2017, and for helicopters with serial number 49046, 49053, 89008, 89009, 92007, or 92008, within 10 hours time-in-service (TIS) after the effective date of this AD, loosen and then torque each nut P/N MS17825-7 (nut) to 15 to 20 Nm (11 to 14.75 ft-lbs), and install a cotter pin and lockwire each nut on the adjustable rod assembly P/N 4F5510A00232, as depicted in Figure 7, Detail N Step 6.5 and Figure 9, Detail P Step 7.9 of EASB 189-177.

(3) Within 10 hours TIS after installing a tail plane retromod, within 10 hours TIS after complying with paragraph (e)(2) of this AD, or within 10 hours TIS after the effective date of this AD, whichever occurs later, and thereafter at intervals not to exceed 50 hours TIS, do the following:

(i) Determine the torque of each nut.

(ii) If the torque is less than 15 Nm (11 ft-lbs) or more than 20 Nm (14.75 ft-lbs), before further flight, remove the bolt and nut and inspect for wear. If there is any wear on the bolt or nut, before further flight, remove the bolt and nut from service.

**(f) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, International Validation Branch, FAA, may approve AMOCs for this AD. Send your proposal to: Scott Franke, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 10101 Hillwood

Pkwy., Fort Worth, TX 76177; telephone 817-222-5110; email 9-AVS-AIR-730-AMOC@faa.gov.

(2) For operations conducted under a 14 CFR part 119 operating certificate or under 14 CFR part 91, subpart K, the FAA suggests that you notify your principal inspector, or lacking a principal inspector, the manager of the local flight standards district office or certificate holding district office, before operating any aircraft complying with this AD through an AMOC.

**(g) Additional Information**

(1) Leonardo Helicopters Service Bulletin No. 189-130, dated January 30, 2017, which is not incorporated by reference, contains additional information about the subject of this AD. For service information identified in this AD, contact Leonardo S.p.a. Helicopters, Emanuele Bufano, Head of Airworthiness, Viale G.Agusta 520, 21017 C.Costa di Samarate (Va) Italy; telephone +39-0331-225074; fax +39-0331-229046; or at <https://www.leonardocompany.com/en/home>. You may view the referenced service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177.

(2) The subject of this AD is addressed in European Aviation Safety Agency (now European Union Aviation Safety Agency) (EASA) AD No. 2018-0047-E, dated February 28, 2018. You may view the EASA AD on the Internet at <https://www.regulations.gov> in the AD Docket.

**(h) Subject**

Joint Aircraft Service Component (JASC) Code: 5510, Tail Stabilizer.

Issued on December 8, 2020.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

[FR Doc. 2020-27452 Filed: 12/14/2020 8:45 am; Publication Date: 12/15/2020]